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LIFE AND WORK ARE THE SAME  
IN MEMORY OF S.G.LEPNEVA

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In April 1993 was the 110th anniversary of the birth of Sofia Grigorievna Lepneva, the famous trichopterologist and limnologist. She was born on 15 April 1883 in Voronezh. Her father was a schoolteacher of mathematics. She remembered when at the age of 9 she stood at the corner at her father's table in a small study, under an abacus hanging on the wall, dreaming in the twilight about her future: she was going to be either an astronomer or a traveller. In summer the family made trips to villages, and her father told stories on warm nights about stars and the universe. Her mother bought books to her, such as those by Kaigorodov's about birds and plants. Inspired by her mother, she wrote to Professor Kaigorodov about her tame birds. The well-known phenologist replied to his young correspondent, and they went on exchanging letters for many years.

When S.G.L. grew older, D.Kaigorodov advised her to buy Maevsky's "Flora of Middle Russia" and to identify plants. At this time she was a senior schoolgirl and she gave private lessons. The first salary from these lessons paid for the book. Three summer seasons in the late 1890's were taken up with plants identifying, and she decided to be a botanist.

When her schooldays were over, S.G.L. entered the Moscow Women's High School because universities were intended exclusively for men. Courses by Professors M.Menzbir, N.Koltsov and other well-known biologists of that time roused her interests in zoology. Young Menzbir's assistant, P.P.Sushkin, was a stimulating teacher, and after his classes the young ladies ran to libraries and book shops to get books for overnight reading. Sushkin's attempts to organize scientific work at the Women's High School were in conflict with the study programme and failed. The Russian edition of Lampert's book on life and fresh water appeared at that time, and Professors N.Koltsov and L.Krechetovich recommended it for excursion guidance. Thus students were steered to the aquatic insects.

The shooting of demonstrators in St.Petersburg in 1905 led to political instability in Russia. The Moscow Women High School was closed down and students demanded a Constituent Assembly and change in the State system. Street combats in Moscow began in December of that year. Students took part in medical units to help the rebels. They were overcome and the revolution was stopped. S.G.L. was a brave woman: she took part in these rebel units, and joined a medical anti-cholera group in Voronezh Province.

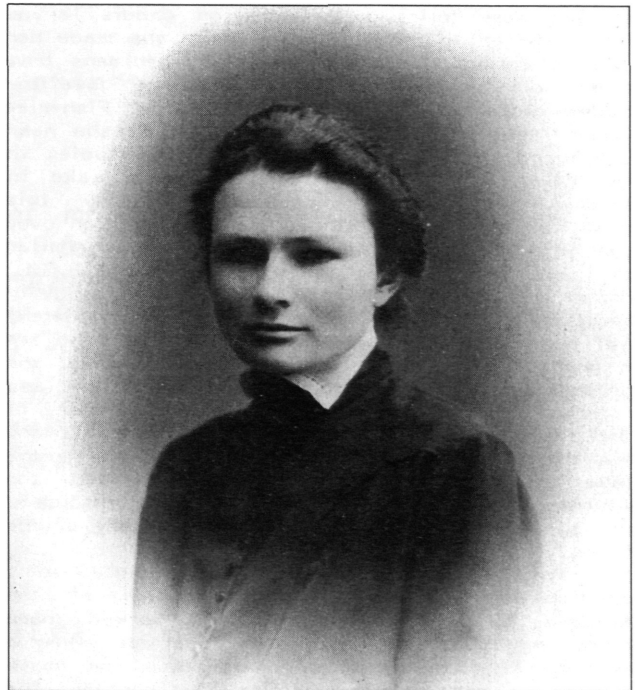
The Moscow Women's High School was reopened and students were allowed to take their final exams. S.G.L. left High School with Lampert's book in hand and without any prospect of a job in Moscow. Women at that time had no chance of making a career in science; the only way was to teach. S.G.L. did not want a place in a government school and found a position in a private school for peasant's children in the remote Samara Province. Private schools at that time did not offer security, and S.G.L. was in three schools in four years. The only advantage was that she could develop her own programmes with practical and collecting work.

In 1911, S.G.L. began to work in a private women school in Yaroslavl in a position just vacated by A.M.Dmitriev, who later became a famous specialist in grass cultivation. Dmitriev moved to Moscow but from time to time he came back to Yaroslavl where he was a teacher and also an agronomist, a museum director, and a leader of the Yaroslavl Natural History Society; S.G.L. learnt much from him. His successor at the Society,

I.V.Serebrennikov wanted S.G.L. to be a bryologist, but she kept to Lampert's book and freshwater faunistics. The Yaroslavl Natural History Society Museum started an exposition about freshwater, and Lepneva with her schoolgirls and the Yaroslavl students became involved. Thus S.G.L. started to specialize in hydrobiology.

The scientific study of fresh water in Yaroslavl Province was proposed to her by Dmitriev in 1914. It was planned to investigate water quality in rivers near the cities of Rybinsk and Yaroslavl, and to write a textbook for the school freshwater excursions. These were the first scientific works carried out by S.G.L. Study groups organized by her collected material, and she sent it to specialists for determination. Caddisflies were mailed to A.V.Martynov who was in the Army at that time during the First World War. That parcel was never received and the collection was lost, and S.G.L. had no reply from Martynov.

In 1916 she published a book "From the life of fresh waters". This field guide for schoolchildren had good press references.



S.G.Lepneva 1916 in Yaroslavl

The revolution of 1917 stopped the activities of the Natural History Society, and S.G.L. decided to organize on her own in the summer 1918 a hydrobiological laboratory in the empty school. She remembers one summer day when there was shooting, and the alarm was sounded. The Civil War had come close to Yaroslavl. She did not pay much attention to the sounds of battle, worked at her laboratory table and did not fear the danger. The next day there was more shooting and a bullet came through the window. She coolly picked it up and put it in the microscope box; then she took her rucksack and excursion bag, and went on foot out of the city. A week later she came back; half the city was in ruins, ravaged by fire. The laboratory was destroyed, but fortunately the microscope was undamaged. The fighting and subsequent events were so shocking that she gave up her scientific work and went back to her native Voronezh. She decided to help the revolutionary forces in their efforts to rebuild Russia and became a travelling lecturer in Voronezh and gave talks on Natural History to workers and peasants in large lecture-halls. In 1919, she took part in the creation of the People's University in Voronezh where she gave the lecture course in invertebrate zoology. The University was closed next year and the job was lost. S.G.L. went to Behning's

Biological Volga Station in the summer of 1920 and studied for two months the lower course of the Volga River. In October she took the chair of zoology in the Yaroslavl College of Education, and carried on with her former work. Her publications on studies made in 1914–1916 including notes on malaria mosquitoes, crustaceans, river pollution, and the Kaspian faunistic elements in Volga River.

She visited Moscow in the beginning of 1921 and met there G.Vereshchagin and V.Glushkov who organized the Hydrobiological Institute. She wanted to participate in their hydrobiological studies and got an invitation to take part in the Olonets scientific expedition. In May 1921 she travelled through Leningrad to Karelia and there worked on the banks of Segozero Lake. A year later on, she left Yaroslavl and got a position in the Hydrobiological Institute in Leningrad.

Her first years in Leningrad were filled with studies of the lakes and rivers of Karelia. The Olonets Expedition carried on for three years. S.G.L. met A.V.Martynov who studied adult caddisflies. She decided to work on caddis larvae in parallel with Martynov's investigations. These studies were followed by work on caddis larvae from different parts of Russia where she made her own collections, and also received specimens from other scientists. At the same time she gave the hydrobiology course in the Leningrad Fisheries College and studied the fish ponds in Ropsha near Leningrad. In 1925 she made sanitary studies in the River Ob and visited the Teletskoe Lake in Altai Mountains. She decided to study this beautiful lake and continued the investigation over the following nine years. Teletskoe Lake is similar to the Lake of Geneva in Switzerland, and S.G.L. hoped to make a comparative limnological study of these lakes. Sadly this work was never completed, but Lepneva's twenty papers on Teletskoe Lake are a good base for future workers. Later in 1945, she presented a thesis on the fauna of this lake and received a degree. This thesis was a summary of the expedition results obtained in 1928–1931; she led this work and published a monograph on the lake in 1949. The monograph described the environmental conditions and fauna and discussed the bionomics of organisms and the history of the fauna.

When 53 years old, she was appointed to a position in the Zoological Institution of the Academy of Sciences of USSR and worked there since from 1936 until her death. She was given a Neuroptera room from A.V.Martynov. The main subject of her studies was larval taxonomy. The aim of these investigations was the preparation of a monograph on immature Trichoptera. She revised critically a lot of literature and improved the larval terminology. Soon she began to publish larval descriptions, but these studies were

interrupted by the Second World War. The Zoological Institute staff was evacuated to Middle Asia, and S.G.L. spent 4 years in Tadzhikistan where she studied *Anopheles* mosquitoes in Stalinabad and the Kondara River fauna in Hissar Mountains. After the war, she came back to Leningrad and continued her work in the Zoological Institute. She wrote a popular book "Stories about freshwater life" (1948, with E.N.Pavlovsky) and parts in the fundamental series "Animal world of USSR" (1953, 1958), and also "Freshwater life in USSR" (1950). Her "Life in lakes" from the last mentioned series is still used as a limnological textbook.

Studies of larvae were continued. New drawings were made by an artist. S.G.L. insisted on the importance of immatures in the study of phylogeny in Trichoptera. Larval structures were associated with the mode of life. Special attention was given to descriptions of immatures from the Caucasus, Middle Asia and Siberia. In the age of 70 she organized an expedition to the Caucasus and collected material near Bakuriani.

Extensive works were carried out at the same time in her Neuroptera room. The Trichoptera collection was kept in perfect order. Lepneva's technical assistants knew all the details of works. She also maintained collections and works on Plecoptera, Odonata, Neuroptera, Ephemeroptera, Mecoptera, Raphidioptera, Thysanoptera, Psocoptera and other small insect orders. Specialists on aquatic insects often visited her for consultation. S.G.L. had a forbidding appearance. Those people who knew her better liked her benevolence, sympathy and modesty. There were many who asked her advice, visited her and wrote to her. Young researchers always could expect her support. She was very fond of belles-lettres, and her oral presentations were interesting and had a brilliant style.

Finally, all works on the monograph on larvae and pupae were completed. The first volume on Annulipalpia was issued in 1964, the second one on Integripalpia in 1966 (both were translated into English in Israel). Several days later on, 8 October 1966, S.G.Lepneva died in the age of 84. She was an active worker until her very last days. At her 80th anniversary she told colleagues that old age is the working time and that the idea about empty oldness is a prejudice. She had began work in science rather late, at the age of 38, but she was very active and wrote a hundred publications (the list is given in: Zhiltsova, L.A., 1991, Life and work of S.G.Lepneva. - Proc.Zool.Inst.Ac.Sci. USSR 242:100–123). Once at the meeting of Science Counsel in the Zoological Institute she claimed: "For us life and work are the same!". This was a motto of her scientific years and of her whole life.

*S.G.Lepneva and her friends at the All-Union Entomological Congress 1959 in Leningrad. Sitting from left to right: E.P.Luppova (working on Neuroptera Myrmeleontidae), O.A.Tchernova (Ephemeroptera), S.G.Lepneva, L.A.Zhiltsova (Plecoptera), N.L.Orshanskaya (the artist illustrating Lepneva's book). Standing from left to right: A.N.Luppova (Isoptera), E.A.Tetyueva (technician, the curator of aquatic insects), M.N.Kandybina (technical assistant), Yu.I.Zapekina-Dulkeit (Plecoptera).*

